10 | Curriculum Vitea

Curriculum Vitea

Jasper van der Velde was born on the 24$^{\text{th}}$ of September 1988 in Arnhem, the Netherlands. He grew up in Valburg being part of a family with two younger brothers. In 2007 he graduated from VWO (high school) at the Canisius College in Nijmegen. He then moved to Groningen, the Netherlands, where he started his Bachelor studies in chemistry at the University of Groningen which he finished in 2010 with a research project on the electrochemical switching of conductance with diarylethene-Based redox-active polymers in the research group of Prof. dr. W. R. Browne. Subsequently, he was admitted to the "Top-Master programme in Nanoscience" at the University of Groningen. During this period he did an internship in the research group of Prof. dr. C.H. van Wal working on the understanding of the kondo effects from emergent localization in quantum point contacts. He finished the Masters degree "*Cum Laude* (with distinction)" in 2012 with a research project on the built-in control of fluorescence at the single molecule level in the group of dr. T. Cordes and Prof. dr. A.M van Oijen, where he established the basis for his future PhD. work. During his PhD. his main focus was on the understanding and development of photostabilization of synthetic organic fluorophores *via* intramolecular means. During his PhD. he also joined the lab of Prof. dr. S.A. Blum at the University of California Irvine (UCI) to work on the observation and study of metal-catalyzed cross coupling reactions using single-molecule fluorescence techniques.

Peer Reviewed Publications

J. H. M. van der Velde, J. Oelerich, J. Huang, J. H. Smit, A. Aminian Jazi, S. Galiani, K. Kolmakov, G. Guoridis, C. Eggeling, A. Herrmann, G. Roelfes and T. Cordes, *A simple and versatile design concept for fluorophore-derivatives with intramolecular photostabilization*, **Nature Communications**, 7, 1-15 (2016). doi: 10.1038/ncomms10144

J. H. M. van der Velde, J. J. Uusitalo, L.J. Ugen, E. M. Warszawik, A. Herrmann, S. J. Marrink and T. Cordes, *Intramolecular photostabilization via triplet-state quenching: design principles to make organic fluorophores "self-healing"*, **Faraday Discussions**, 184, 221-235 (2015). doi: 10.1039/C5FD00114E

J. H. M. van der Velde, J. Oelerich, J. Huang, J. H. Smit, M. Hiermaier, E. Ploetz, A. Herrmann, G. Roelfes, and T. Cordes, *The Power of Two: Covalent Coupling of Photostabilizers for Fluorescence Applications*, **Journal of Physical Chemistry Letters**, 5, 3792-3798 (2014). doi: 10.1021/jz501874f

J. H. M. van der Velde, E. Ploetz, M. Hiermaier, J. Oelerich, J. W. Vries, G. Roelfes and T. Cordes, *Mechanism of Intramolecular Photostabilization in Self-Healing Cyanine Fluorophores*, **ChemPhysChem**, 14, 4084-4093 (2013). doi: 10.1002/cphc.201300785

M. J. Iqbal, Roi Levy, E. J. Koop, J. B. Dekker, J. P. de Jong, **J. H. M. van der Velde**, D. Reuter, A. D.Wieck, R. Aguado, Yigal Meir and C. H. van der Wal, *Odd and even Kondo effects from emergent localization in quantum point contacts*, **Nature**, 501, 79-84 (2013). doi:10.1038/nature12491

H. Logtenberg, **J. H. M. van der Velde**, P. de Mendoza, J. Areephong, J. Hjelm, B. L. Feringa, and W. R. Browne, *Electrochemical Switching of Conductance with Diarylethene-Based Redox-Active Polymers*, **Journal of Physical Chemistry C**, 116, 24136-24142 (2012). doi: 10.1021/jp307892s

Conference Contribitions

International Discussion Meeting; Förster Resonance Energy Transfer in life sciences, FRET2, Goettingen 2016, selected talk, *Enhancing single-molecule FRET studies with photostabilizer-dye conjugates* **J. H. M. van der Velde**, J. Oelerich, J. Huang, J. H. Smit, A. Aminian Jazi, S. Galiani, K. Kolmakov, G. Guoridis, C. Eggeling, A. Herrmann, G. Roelfes and T. Cordes

21st International Workshop on "Single Molecule Spectroscopy and Superresolution Microscopy in the Life Sciences" PicoQuannt 2015, selected talk, *Self-healing fluorophores for super-resolution microscopy*, **J. H. M. van der Velde**, J. Oelerich, J. Huang, J. H. Smit, A. Aminian Jazi, S. Galiani, K. Kolmakov, G. Guoridis, C. Eggeling, A. Herrmann, G. Roelfes and T. Cordes

Annual Dutch Meeting on Molecular and Cellular Biophysics 2015, poster presentation, *Self-healing fluorophores for super-resolution microscopy*, **J. H. M. van der Velde**, J. Oelerich, J. Huang, J. H. Smit, A. Aminian Jazi, S. Galiani, K. Kolmakov, G. Guoridis, C. Eggeling, A. Herrmann, G. Roelfes and T. Cordes

Annual Dutch Meeting on Molecular and Cellular Biophysics 2013, selected talk, *Mechanism of Intramolecular Photostabilization in Self-Healing Cyanine Fluorophores*, **J. H. M. van der Velde**, J. Oelerich, E. Ploetz,, G. Roelfes and T. Cordes

International Photochemistry Conference ICP 2013 Leuven, poster presentation, *Elucidating the mechanism of collision-based fluorophore stabilization with redox-active compounds: diffusion vs. proximity*, **J. H. M. van der Velde**, J. Oelerich, E. Ploetz, M. Hiermaier, G. Roelfes and T. Cordes

Bi-annual Zernike Institute for Advanced Materials meeting, Vlieland 2013, selected talk, *Ultrastable organic fluorophores for single-molecule and superresolution microscopy via proximity of single oxidizing and reducing compounds*, **J. H. M. van der Velde**, J. Oelerich, E. Ploetz, M. Hiermaier, G. Roelfes and T. Cordes

Annual Dutch Meeting on Molecular and Cellular Biophysics 2012, poster presentation, *Chemical reactions and organometallic catalysis on the level of single molecules*, J. H. Smit, **J. H. M. van der Velde**, D. K. Prusty, J. Huang, A. Herrmann and T. Cordes